AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-24.   (Cancelled)

25.   (Currently Amended) ~~In a wireless communication system that employs a layered radio interface protocol,~~ An an apparatus ~~having a radio access standard protocol architecture, wherein the improvement comprises a radio link control (RLC) layer having~~ comprising:

a radio resource control (RRC) layer;

a medium access control (MAC) layer; and

a radio link control (RLC) layer comprising at least three data transmission mode entities, the at least three data transmission mode entities including:

a transparent mode RLC entity ~~having a transmitting side that converts service data units (SDUs) received from an upper layer through a transparent service access point to protocol data units ODUs), whch are submitted to a lower layer, and a receiving side that coverts protocol data units (PDUs) received through configured logical channels from the lower layer to service data units (SDUs), whch are delivered to the upper layer through a transparent service access point~~ adapted to control the transmission of data units between the RRC layer and the MAC layer by segmenting and reassembling data units that have no headers;

an unacknowledged mode RLC entity ~~having a transmitting side that converts service data units (SDUs) received from the upper layer through an unacknowledged service access point to protocol data units (PDUs), which are submitted to the lower layer, and a receiving side that coverts protocol data units (PDUs) received through configured logical channels from the lower layer to service data units (SDUs), which are delivered to the upper layer through an unacknowledged service access point~~ adapted to control the transmission of data units between the RRC layer and the MAC layer by framing and deframing data units and detect and discard data units that contain an error; and

an acknowledged mode RLC entity ~~having a transmitting side that converts service data units (SDUs) received from the upper layer through an acknowledged service access~~

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~~point to protocol data units (PDUs), which are submitted to a lower layer through at least one~~ ~~logical channel, and a receiving side that coverts protocol data units (PDUs) received through~~ ~~configured logical channels from the lower layer to service data units (SDUs), which are~~ ~~delivered to the upper layer through an acknowledged service access point~~ adapted to control the flow of data units between the RRC layer and the MAC layer by framing and deframing data units and by error correction.

26-39.   (Cancelled)

40.   (New) The apparatus of claim 25, wherein the at least three data transmission mode entities in the RLC layer are further adapted to transfer data units between the RLC layer and the MAC layer through one of a plurality of service access points associated with the MAC layer.

41.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a supplemental code channel (SCCH) service access point.

42.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a broadcast control channel (BCCH) service access point.

43.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a paging control channel (PCCH) service access point.

44.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a data traffic channel (DTCH) service access point.

45.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a data control channel (DCCH) service access point.

46.   (New) The apparatus of claim 40, wherein the plurality of service access points includes a common control channel (CCCH) service access point.

47.   (New) The apparatus of claim 25, wherein the at least three transmission mode entities in the RLC are further adapted to receive a plurality of protocol data units from the MAC layer, reassemble the protocol data units into a service data unit and transfer the service data unit to the RRC layer through one of a plurality of service access points associated with the RLC layer.

48.   (New) The apparatus of claim 47, wherein the plurality of service access points associated with the RLC layer includes a transparent service access point (T-SAP).

49.   (New) The apparatus of claim 47, wherein the plurality of service access points associated with the RLC layer includes an unacknowledge service access point (UNACK-SAP).

50.   (New) The apparatus of claim 47, wherein the plurality of service access points associated with the RLC layer includes an acknowledge service access point (ACK-SAP).

51.   (New) In a wireless communication system that employs a layered radio interface protocol that includes a radio resource control (RRC) layer, a medium access control (MAC) layer, a radio link control (RLC) layer, a method of transferring data units from the RRC layer to the MAC layer, the method comprising:

receiving a service data unit from the RRC layer at one of at least three transmission mode entities in the RLC layer;

processing the service data unit, where processing includes one of:

segmenting the service data unit into a plurality of protocol data units, using a transparent mode RLC (RLC-T) entity if the service data unit has no header,

segmenting the service data unit into a plurality of protocol data units and framing the protocol data units, using an unacknowledged mode RLC (RLC-UNACK) entity, and

segmenting the service data unit into a plurality of protocol data, framing the protocol data units and correcting a protocol data unit that contains an error, using an acknowledged mode RLC (RLC-ACK) entity, and;

transferring a plurality of protocol data units from the one transmission mode entity in the RLC layer to the MAC layer through one of a plurality of service access points associate with the MAC layer.

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52.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a supplemental code channel (SCCH) service access point.

53.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a broadcast control channel (BCCH) service access point.

54.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a paging control channel (PCCH) service access point.

55.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a data traffic channel (DTCH) service access point.

56.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a data control channel (DCCH) service access point.

57.   (New) The method of claim 51, wherein the plurality of service access points associated with the MAC layer includes a common control channel (CCCH) service access point.

58.   (New) In a wireless communication system that employs a layered radio interface protocol that includes a radio resource control (RRC) layer, a medium access control (MAC) layer, a radio link control (RLC) layer, a method of transferring data units from the MAC layer to the RLC layer, the method comprising:

receiving a plurality of protocol data units from the MAC layer at one of at least three transmission mode entities in the RLC layer;

processing the service data unit, where processing includes one of:

reassembling the protocol data units into a service data unit, using a transparent mode RLC (RLC-T) entity if there is no header,

deframing the protocol data units, performing error detection on the protocol data units and reassembling the protocol data units into a service data unit, using an unacknowledged mode RLC (RLC-UNACK) entity, and

deframing the protocol data units, performing error correction on the protocol data units and reassembling the protocol data units into a service data unit, using an acknowledged mode RLC (RLC-ACK) entity, and;

transferring the service data unit from the one transmission mode entity in the RLC layer to the RRC layer through one of a plurality of service access points associate with the RLC layer.

59.   (New) The method of claim 58, wherein the plurality of service access points associated with the RLC layer includes a transparent service access point (T-SAP).

60.   (New) The apparatus of claim 58, wherein the plurality of service access points associated with the RLC layer includes an unacknowledge service access point (UNACK-SAP).

61.   (New) The apparatus of claim 58, wherein the plurality of service access points associated with the RLC layer includes an acknowledge service access point (ACK-SAP).